

REMARKS / ARGUMENTS

Reconsideration of the application is requested.

Claims 1 and 4-12 remain in the application. Claims 2-3 have been cancelled. Claims 8-12 have been allowed.

In item 2 on pages 2-3 of the above-mentioned Office action, claims 1, 4-5, and 7 have been rejected as being anticipated by Van Buskirk et al. (US Pat. No. 6,346,741) under 35 U.S.C. § 102(e).

In item 3 on pages 3-4 of the above-mentioned Office action, claims 1, 4-5, and 7 have been rejected as being anticipated by Choi (US Pat. No. 6,030,866) under 35 U.S.C. § 102(e).

In item 5 on pages 4-5 of the above-mentioned Office action, claim 6 has been rejected as being unpatentable over Van Buskirk et al. in view of Ismail et al. (US Pat. No. 5,955,759) under 35 U.S.C. § 103(a).

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, inter alia:

providing a substrate having the structures to be removed on the substrate, the structures to be removed having an aspect ratio of greater than 2 and being formed from a material selected from the group consisting of noble metals, oxides of noble metals, and ferroelectric materials.

The Examiner has stated that "the aspect ratio is best understood by the Examiner as the ratio of width to length as known in the art" (see the last paragraph on page 6 of the Office action). In order to support this definition of aspect ratio, the Examiner has cited Hsieh et al. (US Pat. No. 5,874,764), in which the aspect ratio is understood as width to length in the context of field effect transistors (see column 1, line 12, and lines 29-30: "aspect ratio (i.e., width to length)").

However, the fact that the authors of Hsieh et al. considered it necessary to provide their "definition" of the "aspect ratio" in brackets supports the fact that the term aspect ratio is not used with consistency in the normal usage of this term. Moreover, it is within the context of MOSFET transistors where the ratio of length to width of the channel is a relevant size.

However, the definition brought up by the Examiner is not the definition as used in the relevant state of the art. The aspect ratio is the ratio of height to width. The aspect ratio as defined in this way is in most semiconductor applications a very critical issue.

Applicants refer to Nogami (US Pat. No. 6,710,447), Tews et al. (US Pat. No. 6,426,253), and Lee et al. (US Pat. No. 6,448,149) as evidence to support the above definition. Please note that these documents were found in the Patent Office database by conducting a two-minute search. There could be thousands more documents from the field of semiconductor technology supporting the definition.

Nogami discloses an integrated circuit chip with "high-aspect ratio vias," as can be seen, e.g., in the front page figure. Tews et al. disclose a method of forming a vertically oriented device in an integrated circuit, in which the term aspect ratio is unambiguously used as defined above (see all the figures). Lee et al. disclose a method for making shallow trench isolation in semiconductor fabrication, in which "the HDP-CVD oxide layer partially fills the trenches, reducing the aspect ratio of the trenches" (see the abstract). This means

that the aspect ratio is reduced by reducing the height of the trench.

Therefore, Applicants believe that the term "aspect ratio" is well known in the relevant technical field as defined above, namely as the ratio of height to width.

In view of the foregoing, the Examiner is requested to reconsider the arguments presented by Applicants in the response to the previous office action by applying the correct definition of the term "aspect ratio" and allow of claims or withdraw the finality of this office action.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

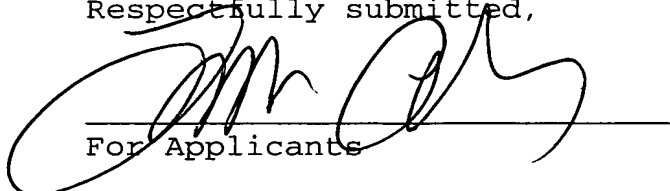
If an extension of time for this paper is required, petition for extension is herewith made. Please charge any fees which might be due with respect to 37 CFR Sections 1.16 and 1.17 to

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the Deposit Account of Lerner and Greenberg, P.A., No. 12-
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Respectfully submitted,

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For Applicant's

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